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लिये फीते — विशिष्टि

(पहला पुनरीक्षण)

Textiles — Tapes for Slide
Fastners — Specification

(First Revision)

ICS 59.080.30

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee had been approved by the Textile Division Council.

Slide fastener is a fastening device consisting of two flexible textile tapes with interlocking elements on the edge of each tape and a slider so arranged that by moving the slider along with those tapes (called as stringer tape) in one direction an opening is formed and by moving it in the opposite direction the opening is closed. The stringer tapes after joining (called as chain) can be fitted with or without end stops. Tape is an arrow textile fabric to which interlocking elements are fitted.

This standard was first published in 1978 and has been revised now to align it with latest trade practices. In the current revision, the width of the tapes have been aligned with those specified in IS 3148 : 1998 'Slide fasteners — General purpose (*fourth revision*) and the use of materials other than cotton has also been permitted.

The composition of the Committee responsible for the formulation of this standard is given in Annex C.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — TAPES FOR SLIDE FASTNERS — SPECIFICATION

(First Revision)

1 SCOPE

This standard covers tapes of width 13, 16, 18 and 20 mm for use in the manufacture of general purpose slide fasteners.

2 REFERENCES

The standards listed in Annex A contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards.

3 MATERIAL AND WEAVE

The tape shall be a woven narrow fabric. Yarn used for the tape making may be cotton, polyester, nylon or any other yarn made from natural, blended fibres or man-made fibres. The tape may be made with one or more than one types of yarn. The tapes shall be woven in a combination of 2/2 broken twill (herring bone)

weave and matt weave (plain weave, 2 picks working as one).

4 WORKMANSHIP

The finished tape should be clean, even and well woven with firm, regular and straight selvedges. The tape should be free from cuts, holes, tears, loose threads and other fabric imperfections and also from oil and other stains. The tape shall be with or without bead (or cord) as specified in the contract or order. In the case of tapes with bead (cord) the bead which is woven integrally or the cord which is securely sewn shall run along one edge of the tape. The tape shall be continuous, without splices and without missing selvedges.

5 PHYSICAL REQUIREMENTS

The tapes conforming to this standard shall meet the physical requirements given in Table 1.

6 CHEMICAL REQUIREMENTS

The tapes shall meet the chemical requirements given in Table 2.

Table 1 Physical Requirements of Tapes for Slide Fastners

(Clause 5)

SI No.	Characteristic	Requirement				Method of Test
(1)	(2)	(3)				(4)
i)	Nominal width, mm (<i>see</i> NOTE)	13	16	18	20	IS 1954
ii)	Length, m (<i>see</i> NOTE)	100 unless otherwise specified				IS 1954
iii)	Thickness, <i>Max</i> , mm	0.45	0.45	0.45	0.45	IS 7702
iv)	Ends in full width	44 ± 2	54 ± 2	61 ± 2	68 ± 2	IS 1963
v)	Picks per cm	26 ± 2	26 ± 2	26 ± 2	26 ± 2	IS 1963
vi)	Mass, <i>Max</i> , g/m	4.0	5.0	5.6	6.2	IS 1964
vii)	Weft-way breaking load, <i>Min</i> , N (kgf)	343 (35)	343 (35)	343 (35)	343 (35)	Annex B
viii)	Water absorption, <i>Max</i> , Percent (if declared moisture-proof)	40	40	40	40	Appendix B of IS 6488

NOTE — Width shall be determined to nearest 0.5 mm and length to the nearest metre. Tapes of widths other than those specified may also be supplied and in that case, the ends in full width and mass will change proportionally.

Table 2 Chemical Requirements of Tapes for Slide Fastners
(Clause 6)

Sl No.	Characteristic	Requirement	Method of Test
(1)	(2)	(3)	(4)
i)	Rot proofness (as zinc content), percent (<i>see</i> NOTE)	0.8 to 1.2	IS 3522 (Part 2)
ii)	Colour fastness to (for dyed tapes only)		
	a) Artificial light	5 or better	IS/ISO 105-B02
	b) Sea water	4 or better	IS 690
	c) Washing test, No. 4	4 or better	IS/ISO 105-C10
	d) Organic solvents	4 or better	IS 688

NOTE — Applicable to cotton tapes only if specified in contract or order.

7 PACKING AND MARKING

7.1 Packaging

The tapes shall be packed in rolls in such a way that the edges are not folded over. The rolls shall be individually wrapped in kraft paper.

7.2 Marking

7.2.1 Each roll of tape shall be legibly marked with the following information:

- Name of the material and whether moisture-proof;
- Width and thickness of tape (mm);
- Length of roll (m);
- Lot/Batch no.; and
- Indication of the source of manufacture.

7.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

8 SAMPLING

8.1 The lot shall consist of all the tape rolls of same nominal width and delivered against same despatch note.

8.2 Unless otherwise sampling plan may be specified in the contract or order the sampling plan as given in Table 3 may be used for inspecting and testing of tapes against this standard.

Table 3 Sampling Plan for Tapes for Slide Fastners
(Clause 8.2)

Lot Size	Sample Size (For Length, Width, Thickness Ends and Picks)	Permissible No. of Defectives	Sub-sample Size (For Remaining Requirements)
(1)	(2)	(3)	(4)
Up to 100	8	0	3
101 to 300	13	1 (<i>see</i> NOTE 1)	4
301 to 500	20	1	5
501 to 1000	32	2	7
1001 and above	50	3	10

NOTES

1 In the case of length, the value obtained for the length of each roll shall be compared with its specified, declared or marked length. The mean percentage of deficiency in length, if any, shall be determined and made applicable to the lot.

2 In respect of mass, breaking strength, water absorption and rot proofness Mean \pm 0.4 Range shall not outpass specified values.

3 In respect of colour fastness, no failure shall be permissible.

ANNEX A

(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
IS/ISO 105-B02 : 2014	Textiles — Tests for colour fastness: Part B 02 Colour fastness to artificial light — Xenon arc fading lamp test (Superseding IS 2454 : 1985)	1954 : 1990	Determination of length and width of woven fabrics — Methods
IS/ISO 105-C10 : 2006	Textiles — Tests for colour fastness: Part C10 Colour fastness to washing with soap or soap and soda (superseding IS 687 : 1979, IS 764 : 1979, IS 765 : 1979, IS 3361 : 1979 and IS 3417 : 1979)	1963 : 2004	Methods for determination of threads per unit length in woven fabrics
		1964 : 2001	Methods for determination of mass per unit length and mass per unit area of fabrics
688 : 1988	Method for determination of colour fastness of textile materials to organic solvents (<i>first revision</i>)	3522 (Part 2) : 1989	Textiles — Estimation of common preservatives: Part 2
		6488 : 1999	Textiles — Cotton webbing for personal web equipment (<i>second revision</i>)
690 : 1988	Method for determination of colour fastness of textile materials to sea water (<i>first revision</i>)	IS 7702 : 2012/ ISO 5084 : 1996	Textiles — Determination of thickness of textiles and textile products

ANNEX B

[Table 1, Item (vii)]

METHOD FOR DETERMINATION OF BREAKING LOAD (WEFTWAY)**B-1 APPARATUS**

A constant-rate-of-traverse type breaking load testing machine with a rate-of-traverse of 300 mm/min with fair faces of 25.4×25.4 mm shall be used.

B-2 PROCEDURE

Set the clamps of the testing machine so that the distance between them is 5 mm. Take 10 mm length

test specimen and insert it centrally in the clamps so that the weft direction of the tape is parallel to the application of load with approximately the same width of tape gripped by each clamp. Operate the machine and carry the test to rupture and record the breaking load. Similarly determine the breaking load at 4 more places.

ANNEX C

(Foreword)

COMMITTEE COMPOSITION

Technical Textiles for Clothtech Applications including Narrow
Fabrics and Braids, TXD 39

<i>Organization</i>	<i>Representative(s)</i>
Senior Quality Assurance Establishment Directorate General of Quality Assurance Ministry of Defence	SHRI A. CHOWDHURY (Chairman)
Federation of Indian Chambers of Commerce and Industry, New Delhi	SHRI ANU HANDA
ICAR-Central Institute for Research on Cotton Technology, Mumbai	DR P. JAGAJANANTHA DR T. SENTHILKUMAR (<i>Alternate</i>)
Indian Technical Textile Association, Mumbai	DR ANUP RAKSHIT SHRI VIKRAM JAIN (<i>Alternate</i>)
M K U Limited, Kanpur	SHRI SUMIT KHANDELWAL SHRI RAJIB PAL (<i>Alternate</i>)
Motilal Dulichand Pvt Ltd, Kanpur	SHRI SHAILENDRA NATH MISRA SHRI SUDHIR SHIVHARE (<i>Alternate</i>)
National Textile Corporation, New Delhi	SHRI R. K. YADAV
Ordnance Parachute Factory, Kanpur	SHRI V. M. BAGADE SHRI S. KONDAIAH (<i>Alternate</i>)
Planet Analysis Pvt Ltd, Kanpur	SHRI PRASHANTA BISWAS
SGS Limited, Gurugram	SHRI GAURAV SARSWAT SHRI ASHISH RAWAT (<i>Alternate</i>)
Shipra International, Kanpur	SHRI ABHISHEK KUMAR AGRAWAL
S L Banthia Textiles Industries Pvt Ltd	SHRI SANTOSH KUMAR BANTHIA
Textiles Committee, New Delhi	SHRI SANJAY KUMAR KORVI SHRI H. K. GAUR (<i>Alternate</i>)
Thanawala & Co, Mumbai	SHRI HEMAL THANAWALA SHRI UPENDRA THANAWALA (<i>Alternate</i>)
The Bombay Textile Research Association, Mumbai	SHRI SHAIKH RIYAZ AHMED DR PRASANTA KUMAR PANDA (<i>Alternate</i>)
The Office of Textile Commissioner, Mumbai	SHRI AMAR K. CHAPHEKAR SHRI HUMAYUN K. (<i>Alternate</i>)
Universal Yarn & Tex Pvt Ltd, Kanpur	SHRI RAJIV K. BHARTIYA
BIS Director General	SHRI A. K. BERA SCIENTIST 'F' AND HEAD (TXD) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary

SHRI A. K. BERA
SCIENTIST 'F' AND HEAD (TXD), BIS

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